

## REMARKS

### Claim Status

Claims 60-68, previously withdrawn by the Examiner as being drawn to non-elected invention in the Office Action mailed on February 27, 2008, are now cancelled.

Claims 37-44, 46-59 and 69-72 are pending.

### Claim Amendments

Claims 60-68 are cancelled.

Claim 37 is amended to delete the value of hydrogen from the list of permitted values of variables  $R_1$  through  $R_4$ .

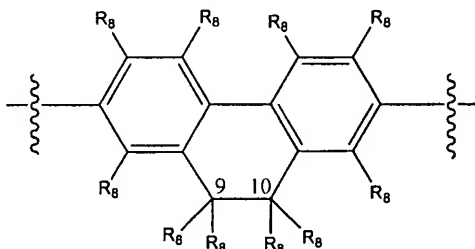
### Rejection of Claims 37-44, 49-59 and 69-72 under 35 U.S.C. §102(b)

Claims 37-44, 49-59 and 69-72 have been rejected as being anticipated by Noguchi *et al.*, EP 1074600 (hereinafter, "Noguchi"), under 35 U.S.C. §102(b).

The Examiner recapitulated the arguments presented in the Office Action of February 27, 2008. The Examiner further stated that the open language of base Claim 37 does not exclude the repeat unit described in Naguchi on page 7, lines 30-35.

Applicants disagree with the Examiner's interpretation and construction of Claim 37. However, in the interest of moving the prosecution of the instant case forward, Applicants amended Claim 37 to delete the value of hydrogen from among the permitted values of variables  $R_1$  through  $R_4$ . Applicants submit that Claim 37 and claims dependent thereon are both novel and non-obvious in view of Naguchi.

The portion of Naguchi relied upon by the Examiner describes a repeat unit comprising a dihydrophenanthrene of the following formula (Naguchi, page 7, lines 30-35; positions 9 and 10 are labeled):



The values of R<sub>8</sub> are listed on page 8, paragraph [0027] of Naguchi.

Applicants' inspection of Naguchi indicates that the repeat unit of page 7, lines 30-35 of Naguchi is exemplified by one subgenus and one species. Namely, on page 8, lines 25-30 Naguchi describes a subgenus of the above-reproduced structure in which positions 9 and 10 are each monosubstituted. Further, on page 30, lines 1-10, a species of *a* repeat unit is described, comprising dihydrophenanthrene. Again, the 9 and 10 positions of this repeat unit are each monosubstituted.

Thus, Naguchi fails to *specifically* teach a dihydrophenanthrene-containing repeat unit in which both positions 9 and 10 are each *disubstituted*. This, however, is the element of Claim 37 as now amended. Accordingly, Claim 37 as amended is novel over Naguchi.

Applicants further submit that Claim 37 as amended is non-obvious over Naguchi. The Examiner's attention is directed at page 16, lines 1-16 of the English translation of the instant application as filed. This portion of the disclosure states:

The necessary solubility of the polymers is ensured, in particular, by the substituents R1 to R4, both on units of the formula (I) and on the other repeating units. [...] To ensure sufficient solubility, preference is given to an average of at least 2 nonaromatic carbon atoms being present in the substituents per repeating unit. Preference is here given to at least 4, particularly preferably at least 8, carbon atoms. [...] Nonaromatic carbon atoms are, as, for example, stated in the description of R1 to R4 in the formula (1), present in appropriate straight-chain, branched or cyclic alkyl or alkoxy chains. (*Emphasis added*)

In other words, the present application teaches that selecting non-hydrogen substituents at positions 9 and 10 of a dihydrophenanthrene-containing repeat unit (*e.g.*, "non-aromatic carbon atoms" in substituents R1 through R4) results in improved solubility. Improved solubility is a surprising and unappreciated advantage of disubstitution of the indicated positions.

Naguchi, however, neither suggests nor motivates one of ordinary skill in the art to select dihydrophenanthrene-containing repeat unit having both positions 9 and 10 disubstituted from among all possible substitution patterns of the repeat unit of page 7, lines 30-35 of Naguchi. In fact, the opposite is true: the only examples of such a unit shown are those that are monosubstituted at the positions in question, thus directing one of ordinary skill away from disubstitution. Furthermore, Applicants demonstrated unexpected advantages of the

disubstitution pater, now an element of Claim 37 as amended. Accordingly, Claim 37 and claims dependent thereon are non-obvious over Naguchi.

Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 46-48 under 35 U.S.C. §103(a)

The Examiner recapitulated the arguments presented in the Office Action of February 27, 2008. (Claims 46-48 as being unpatentable over Noguchi under 35 U.S.C. §103(a), as applied to Claim 37, and further in view of Baldo *et al.*, Appl. Phys. Lett., 75(1),1999, (hereinafter, Baldo).)

The Examiner further stated that the open language of base Claim 37 does not exclude the repeat unit described in Naguchi on page 7, lines 30-35.

As noted above, Noguchi does not disclose the repeat unit presented in Claim 37, as amended. Without going in further merits of Baldo, Applicants note that Baldo does not overcome the deficiency of Noguchi over instant invention because Baldo does not teach or suggest modifying Noguchi to arrive at the repeat unit recited in Claim 37, as amended. Indeed, Baldo does not even disclose a dihydrophenanthrene unit, or any modification of a dihydrophenanthrene unit.

In view of the above, Claims 46-48 are non-obvious over Noguchi, in the view of Baldo. Reconsideration and withdrawal of the rejection are respectfully requested.

**CONCLUSION**

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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